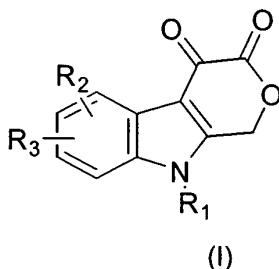
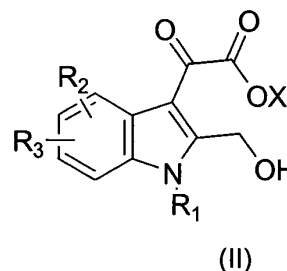


## WHAT IS CLAIMED:

1. A compound of formulas I and II:



and



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wherein:

X is hydrogen, an alkali metal or a basic amine moiety

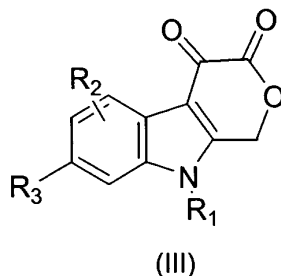
- 10  $R_1$  is  $C_1$ - $C_8$  alkyl,  $C_3$ - $C_6$  cycloalkyl,  $-CH_2$ - $C_3$ - $C_6$  cycloalkyl, pyridinyl,  $-CH_2$ -pyridinyl, phenyl or benzyl, wherein the rings of the cycloalkyl, pyridinyl, phenyl and benzyl groups may be optionally substituted by from 1 to 3 groups selected from halogen,  $C_1$ - $C_6$  alkyl,  $C_1$ - $C_6$  perfluoroalkyl,  $-O$ - $C_1$ - $C_6$  perfluoroalkyl,  $C_1$ - $C_6$  alkoxy,  $-OH$ ,  $-NH_2$ , or  $-NO_2$ ;

- 15  $R_2$  is hydrogen, halogen,  $C_1$ - $C_6$  alkyl,  $C_1$ - $C_3$  perfluoroalkyl,  $C_1$ - $C_6$  alkoxy,  $C_3$ - $C_6$  cycloalkyl,  $-CH_2$ - $C_3$ - $C_6$  cycloalkyl, hydroxy,  $-NH_2$ , or  $-NO_2$ ;

- 20  $R_3$  is hydrogen, halogen,  $C_1$ - $C_6$  alkyl,  $C_1$ - $C_3$  perfluoroalkyl,  $C_1$ - $C_6$  alkoxy,  $C_3$ - $C_6$  cycloalkyl,  $-CH_2$ - $C_3$ - $C_6$  cycloalkyl, hydroxy,  $-NH_2$ ,  $-NO_2$ , phenyl, benzyl, benzyloxy, pyridinyl, or  $-CH_2$ -pyridinyl, wherein the rings of these groups may be optionally substituted by from 1 to 3 groups selected from phenyl, halogen,  $C_1$ - $C_6$  alkyl,  $C_1$ - $C_6$  perfluoroalkyl,  $-O$ - $C_1$ - $C_6$  perfluoroalkyl,  $C_1$ - $C_6$  alkoxy,  $-OH$ ,  $-NH_2$ , or  $-NO_2$ ; or a pharmaceutically acceptable salt or ester form thereof.

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2. A compound of formula III:



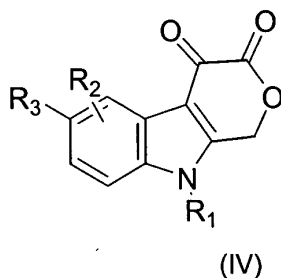
5 wherein:

$R_1$  is  $C_1$ - $C_8$  alkyl,  $C_3$ - $C_6$  cycloalkyl,  $-CH_2$ - $C_3$ - $C_6$  cycloalkyl, pyridinyl,  $-CH_2$ -pyridinyl, phenyl or benzyl, wherein the rings of the cycloalkyl, pyridinyl, phenyl and benzyl groups may be optionally substituted by from 1 to 3 groups selected from halogen,  $C_1$ - $C_6$  alkyl,  $C_1$ - $C_6$  perfluoroalkyl,  $-O$ - $C_1$ - $C_6$  perfluoroalkyl,  $C_1$ - $C_6$  alkoxy,   
 10  $-OH$ ,  $-NH_2$ , or  $-NO_2$ ;

$R_2$  is hydrogen, halogen,  $C_1$ - $C_6$  alkyl,  $C_1$ - $C_3$  perfluoroalkyl,  $C_1$ - $C_6$  alkoxy,  $C_3$ - $C_6$  cycloalkyl,  $-CH_2$ - $C_3$ - $C_6$  cycloalkyl,  $-NH_2$ , or  $-NO_2$ ;

15  $R_3$  is hydrogen, halogen,  $C_1$ - $C_6$  alkyl,  $C_1$ - $C_3$  perfluoroalkyl,  $C_1$ - $C_6$  alkoxy,  $C_3$ - $C_6$  cycloalkyl,  $-CH_2$ - $C_3$ - $C_6$  cycloalkyl, hydroxy,  $-NH_2$ ,  $-NO_2$ , phenyl, benzyl, benzyloxy, pyridinyl, or  $-CH_2$ -pyridinyl, wherein the rings of these groups may be optionally substituted by from 1 to 3 groups selected from halogen,  $C_1$ - $C_6$  alkyl,  $C_1$ - $C_6$  perfluoroalkyl,  $-O$ - $C_1$ - $C_6$  perfluoroalkyl,  $C_1$ - $C_6$  alkoxy,  $-OH$ ,  $-NH_2$ , or  $-NO_2$ ; or a   
 20 pharmaceutically acceptable salt or ester form thereof.

3. A compound of formula (IV)



25

wherein:

R<sub>1</sub> is C<sub>1</sub>-C<sub>8</sub> alkyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, -CH<sub>2</sub>-C<sub>3</sub>-C<sub>6</sub> cycloalkyl, pyridinyl, -CH<sub>2</sub>-pyridinyl, phenyl or benzyl, wherein the rings of the cycloalkyl, pyridinyl, phenyl and benzyl groups may be optionally substituted by from 1 to 3 groups selected from  
 5 halogen, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> perfluoroalkyl, -O-C<sub>1</sub>-C<sub>6</sub> perfluoroalkyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, -OH, -NH<sub>2</sub>, or -NO<sub>2</sub>;

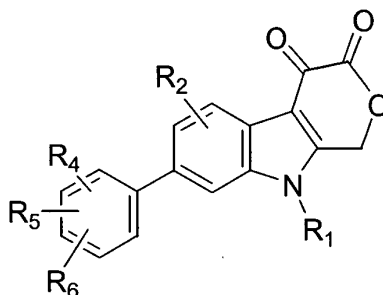
R<sub>2</sub> is hydrogen, halogen, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>3</sub> perfluoroalkyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, -CH<sub>2</sub>-C<sub>3</sub>-C<sub>6</sub> cycloalkyl, -NH<sub>2</sub>, or -NO<sub>2</sub>;

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R<sub>3</sub> phenyl, benzyl, benzyloxy, pyridinyl, or -CH<sub>2</sub>-pyridinyl, with the rings of these groups being optionally substituted by from 1 to 3 groups selected from halogen, C<sub>1</sub>-C<sub>3</sub> alkyl, C<sub>1</sub>-C<sub>3</sub> perfluoroalkyl, -O-C<sub>1</sub>-C<sub>3</sub> perfluoroalkyl, C<sub>1</sub>-C<sub>3</sub> alkoxy, -OH, -NH<sub>2</sub>, or -NO<sub>2</sub>; or a pharmaceutically acceptable salt or ester form thereof.

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4. A compound of formula (V):



(V)

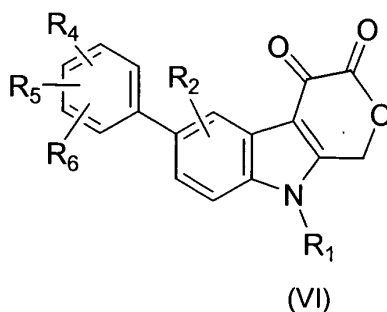
wherein:

20 R<sub>1</sub> is C<sub>1</sub>-C<sub>8</sub> alkyl, preferably C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, -CH<sub>2</sub>-C<sub>3</sub>-C<sub>6</sub> cycloalkyl, or benzyl, wherein the rings of the cycloalkyl and benzyl groups may be optionally substituted by from 1 to 3 groups selected from halogen, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> perfluoroalkyl, -O-C<sub>1</sub>-C<sub>6</sub> perfluoroalkyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, -OH, -NH<sub>2</sub>, or -NO<sub>2</sub>;

25 R<sub>2</sub> is hydrogen, halogen, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>3</sub> perfluoroalkyl, preferably -CF<sub>3</sub>, C<sub>1</sub>-C<sub>6</sub> alkoxy, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, -CH<sub>2</sub>-C<sub>3</sub>-C<sub>6</sub> cycloalkyl, hydroxy, -NH<sub>2</sub>, or -NO<sub>2</sub>;

$R_4$ ,  $R_5$  and  $R_6$  are each independently hydrogen, phenyl, halogen,  $C_1$ - $C_3$  alkyl,  $C_1$ - $C_3$  perfluoroalkyl, -O- $C_1$ - $C_3$  perfluoroalkyl,  $C_1$ - $C_3$  alkoxy, -OH, -NH<sub>2</sub>, or -NO<sub>2</sub>; or a pharmaceutically acceptable salt or ester form thereof.

- 5                    5.        A compound of formula VI:



wherein:

- 10                     $R_1$  is  $C_1$ - $C_8$  alkyl,  $C_3$ - $C_6$  cycloalkyl, -CH<sub>2</sub>- $C_3$ - $C_6$  cycloalkyl, or benzyl, wherein the rings of the cycloalkyl and benzyl groups may be optionally substituted by from 1 to 3 groups selected from halogen,  $C_1$ - $C_6$  alkyl,  $C_1$ - $C_6$  perfluoroalkyl, preferably -CF<sub>3</sub>, -O- $C_1$ - $C_6$  perfluoroalkyl, preferably -O-CF<sub>3</sub>,  $C_1$ - $C_6$  alkoxy, -OH, -NH<sub>2</sub>, or -NO<sub>2</sub>;

- 15                     $R_2$  is hydrogen, halogen,  $C_1$ - $C_6$  alkyl,  $C_1$ - $C_3$  perfluoroalkyl, preferably -CF<sub>3</sub>,  $C_1$ - $C_6$  alkoxy,  $C_3$ - $C_6$  cycloalkyl, -CH<sub>2</sub>- $C_3$ - $C_6$  cycloalkyl, hydroxy, -NH<sub>2</sub>, or -NO<sub>2</sub>; and

- 20                     $R_4$ ,  $R_5$  and  $R_6$  are each independently hydrogen, halogen,  $C_1$ - $C_3$  alkyl,  $C_1$ - $C_3$  perfluoroalkyl, preferably -CF<sub>3</sub>, -O- $C_1$ - $C_3$  perfluoroalkyl, preferably -O-CF<sub>3</sub>,  $C_1$ - $C_3$  alkoxy, -OH, -NH<sub>2</sub>, or -NO<sub>2</sub>; or a pharmaceutically acceptable salt or ester form thereof.

- 25                    6.        The compound of Claim 1 which is 9-(4-Methylbenzyl)-6-[4-(trifluoromethoxy)phenyl]-1,9-dihydropyrano[3,4-*b*]indole-3,4-dione or a pharmaceutically acceptable salt or ester form thereof.

7.        The compound of Claim 1 which is 9-Benzyl-6-[4-(trifluoromethoxy)phenyl]-1,9-dihydropyrano[3,4-*b*]indole-3,4-dione or a pharmaceutically acceptable salt or ester form thereof.

8. The compound of claim 1 which is 9-(4-Methylbenzyl)-6-(3-Methylphenyl)-1,9-dihydropyrano[3,4-b]indole-3,3-dione or a pharmaceutically acceptable salt or ester form thereof.

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9. The compound of claim 1 which is 9-(4-tert-butylbenzyl)-6-(3-Methylphenyl)-1,9-dihydropyrano[3,4-b] indole-3,4-dione or a pharmaceutically acceptable salt or ester form thereof.

10

10. The compound of claim 1 which is 6-(Benzyloxy)-9-(4-methylbenzyl)-1,9-dihydropyrano[3,4-b]indole-3,4-dione or a pharmaceutically acceptable salt or ester form thereof.

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11. The compound of claim 1 which is 6-(Benzyloxy)-1,9-dihydropyrano[3,4-b]indole-3,4-dione or a pharmaceutically acceptable salt or ester form thereof.

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12. The compound of claim 1 which is 6-(Benzyloxy)-9-(4-tertbutylbenzyl)-1,9-dihydropyrano[3,4-b]indole-3,4-dione or a pharmaceutically acceptable salt or ester form thereof.

25

13. The compound of claim 1 which is 9-(4-tertbutylbenzyl)-6-hydroxy-1,9-dihydropyrano[3,4-b]indole-3,4-dione or a pharmaceutically acceptable salt or ester form thereof.

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14. The compound of claim 1 which is 9-benzyl-6-(4-chlorophenyl)-1,9-dihydropyrano[3,4-b]indole-3,4-dione or a pharmaceutically acceptable salt or ester form thereof.

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15. The compound of claim 1 which is [1-benzyl-5-(4-chlorophenyl)-2-(hydroxymethyl)-1H-indole-2-yl] (oxo)acetic acid, or a pharmaceutically acceptable salt or ester form thereof.

16. The compound of claim 1 which is 9-benzyl-6-(3-Methylphenyl)-1,9-dihydropyrano[3,4-b]indole-3,4-dione or a pharmaceutically acceptable salt or ester form thereof.

5

17. The compound of claim 1 which is 9-benzyl-6-(1-1-bi-phenyl-4-yl)-1,9-dihydropyrano[3,4-b]indole-3,4-dione or a pharmaceutically acceptable salt or ester form thereof.

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18. The compound of claim 1 which is [1-benzyl-5-(1,1-biphenyl-4-yl)-2-(hydroxymethyl)-1H-indole-3-yl] (oxo)acetic acid, or a pharmaceutically acceptable salt or ester form thereof.

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19. A method of inhibiting plasminogen activator inhibitor in a mammal comprising administering to a mammal in need thereof a therapeutically effective amount of a compound of claim 1

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20. A pharmaceutical composition comprising a compound of claim 1 and a pharmaceutical carrier.

21. A method for treatment of thrombosis or fibrinolytic impairment in a mammal, the method comprising administering to a mammal in need thereof a pharmaceutically effective amount of a compound of Claim 1.

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22. A method of Claim 21 wherein the thrombosis or fibrinolytic impairment is associated with formation of atherosclerotic plaques, venous and arterial thrombosis, myocardial ischemia, atrial fibrillation, deep vein thrombosis, coagulation syndromes, pulmonary fibrosis, cerebral thrombosis, thromboembolic complications of surgery or peripheral arterial occlusion.

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23. A method for the treatment of peripheral arterial disease in a mammal, comprising administering to a mammal in need thereof a pharmaceutically effective amount of a compound of Claim 1.

24. A method for the treatment of stroke associated with or resulting from atrial fibrillation in a mammal, comprising administering to a mammal in need thereof a pharmaceutically effective amount of a compound of Claim 1.

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25. A method for the treatment of deep vein thrombosis in a mammal, comprising administering to a mammal in need thereof a pharmaceutically effective amount of a compound of Claim 1.

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26. A method for the treatment of myocardial ischemia in a mammal, comprising administering to a mammal in need thereof a pharmaceutically effective amount of a compound of Claim 1.

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27. A method for the treatment of a cardiovascular disease caused by noninsulin dependent diabetes mellitus in a mammal, comprising administering to a mammal in need thereof a pharmaceutically effective amount of a compound of Claim 1.

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28. A method for the treatment of the formation of atherosclerotic plaques in a mammal, comprising administering to a mammal in need thereof a pharmaceutically effective amount of a compound of Claim 1.

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29. A method for the treatment of chronic obstructive pulmonary disease in a mammal, comprising administering to a mammal in need thereof a pharmaceutically effective amount of a compound of Claim 1.

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30. A method for the treatment of renal fibrosis in a mammal, comprising administering to a mammal in need thereof a pharmaceutically effective amount of a compound of Claim 1.

31. A method for the treatment of polycystic ovary syndrome in a mammal, comprising administering to a mammal in need thereof a pharmaceutically effective amount of a compound of Claim 1.

32. A method for the treatment of Alzheimer's disease in a mammal, comprising administering to a mammal in need thereof a pharmaceutically effective amount of a compound of Claim 1.

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33. A method for the treatment of cancer in a mammal, comprising administering to a mammal in need thereof a pharmaceutically effective amount of a compound of Claim 1.

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